

Abstract

The invention relates to a method, control unit 200, and computer program for detecting a defective intake-manifold pressure sensor 220 and/or a defective ambient-pressure sensor 210 in an internal combustion engine 100. The related art already describes diagnostic methods and devices for detecting the defectiveness of intake-manifold pressure sensors, but only in conventional internal combustion engines in which the load is controlled via the throttle valve 122, and not for internal combustion engines 100 in which the load is controlled via the valve timing. Therefore, on the basis of this related art, the object of the present invention is to further develop a known method, a known control unit 200, and a known computer program for detecting a defective intake-manifold pressure sensor 220 and/or a defective ambient-pressure sensor 210 in a conventional internal combustion engine 100 in such a manner, that this detection is also possible in internal combustion engines 100 having valve timing. This object of the present invention is achieved in that the desired detection is carried out exclusively on the basis of a direct evaluation of the pressure upstream from the throttle valve 122 and the pressure in the intake manifold 120. This advantageously eliminates the need for deriving load signals from these pressures, as is necessary in the related art, at least for the determination as to whether at least one of the pressure sensors is defective (Fig. 1).